

CLAIMS:

- Sehr A2*
- Board
Decision*
1. A device for introducing or withdrawing an agent through a body surface, comprising:
 - a member having a plurality of protrusions extending from a body surface contacting side of the member; and
 - a connecting medium capable of storing the agent therein or passing the agent therethrough on at least a portion of the body surface contacting side of the member.
 2. The device of Claim 1 wherein the member has an opening therethrough.
 3. The device of Claim 2 wherein the connecting medium extends across the opening.
 4. The device of Claim 2 wherein the connecting medium extends through the opening.
 5. The device of Claim 2 wherein the connecting medium is in the opening.
 6. The device of Claim 1 wherein the connecting medium is in the range of about 10 micrometers to about 100 micrometers thick.
 7. The device of Claim 1 wherein the connecting medium is about 50 micrometers thick.
 8. The device of Claim 1 wherein the connecting medium comprises a hydrogel.

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9. The device of Claim 1 wherein the connecting medium is preloaded with the agent to be delivered through the body surface.

10. The device of Claim 1 wherein the connecting medium comprises a form selected from the group consisting of a gel, a solid and a powder.

11. The device of Claim 1 wherein the connecting medium further comprises a matrix material.

12. The device of Claim 1 wherein the protrusions comprise blades.

13. The device of Claim 12 wherein at least one of the plurality of blades comprises means for anchoring the device to the body surface.

14. The device of Claim 1 further comprising an agent delivery device connected to a second side of the member, the agent delivery device selected from the group consisting of an electrotransport device, a passive device, an osmotic device, and a pressure driven device.

15. The device of Claim 14 wherein the agent is selected from the group consisting of a gene, a polypeptide, and a protein.

16. The device of Claim 1 further comprising a sampling device connected to a second side of the member, the sampling device selected from the group consisting of a reverse electrotransport device, a passive device, and an osmotic device.

17. The device of Claim 16 wherein a sampled agent is selected from the

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group consisting of body electrolytes, illicit drugs and glucose.

18. A device for introducing or withdrawing an agent through a body surface, the device comprising:

a plurality of protrusions extending from a first side and an opening through the device between the protrusions; and

a connecting medium capable of storing the agent therein or passing the agent therethrough being predisposed in the opening.

19. The device of Claim 18 wherein the connecting medium is predisposed on a portion of the first side.

20. The device of Claim 18 wherein the agent is selected from the group consisting of a gene, a polypeptide, and a protein.

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21. The device of Claim 18 wherein the connecting medium comprises a hydrogel.

22. The device of Claim 18 wherein the connecting medium is preloaded with an agent to be delivered through the body surface.

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23. A method for introducing or withdrawing an agent through a body surface, comprising the steps of:

piercing the body surface with a plurality of protrusions extending from a first side of a member having a connecting medium capable of storing the agent therein or passing the agent therethrough on at least a portion of the first side;

contacting the body surface with the connecting medium; and

passing the agent through the body surface.

24. The method of Claim 23 wherein the passing step comprises:
administering the agent by a method selected from the group consisting of
electrotransport, passive delivery, osmosis, and pressure.

a sub B2 ~~25.~~ 26 The method of Claim 23 wherein the passing step comprises:
sampling the agent by a method selected from the group consisting of
reverse electrotransport, passive sampling, and osmosis.

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